

DOCUMENT RESUME

ED 122 264

CS 002 636

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TITLE The Status of Remediation in American Junior Colleges.
PUB DATE 76
NOTE 43p.; Study prepared at Dean Junior College; reproduced from best copy available
EDRS PRICE MF-\$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS *Compensatory Education; Educationally Disadvantaged; Junior Colleges; Learning Laboratories; Literature Reviews; *Program Evaluation; *Reading Instruction; *Reading Programs; *Remedial Reading Programs

ABSTRACT

Junior colleges with open enrollment policies have as students many of the adults in this country whom national surveys and studies have indicated are functionally incompetent or barely literate. This paper contains a review of the literature concerning junior college remedial reading programs and compensatory education programs. The four questions considered are: (1) What level of basic skills preparation has been provided currently enrolling freshmen and what are their specific deficiencies? (2) What has been done to date by community colleges in basic skills remediation? (3) What are some program options open to a concerned institution? and (4) What is the status of research in this area? Evidence is cited to prove that many junior college students enter with academic deficiencies. Many junior colleges do offer courses in basic skills remediation, but although the literature provides many examples of program descriptions, there are few examples of program evaluation. The majority of colleges that have evaluated their remedial/developmental programs have reported negative results. (MKN)

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The Status of Remediation in
American Junior Colleges

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INTRODUCTION

During the Fall's SORT testing of entering freshmen at Dean Junior College, a private, selective admissions institution, a depressing reality was underscored. Of 435 students tested using the Nelson-Denny reading test and the Houghton-Mifflin Test of English, 191 scored below the thirtieth percentile--the cut-off point for remediation placement recommended by the test editors. This represented an increase of six percent (38% to 44%) in the number of entering students requiring reading assistance. This pattern of decreasing proficiency in basic communication skills prompted the research presented in this paper.

A recent study conducted by the University of Texas and sponsored by the U. S. Office of Education concluded that one-fifth of the nation's adult population is "functionally incompetent"--deficient in the basic skills necessary to function as workers, consumers, citizens and parents (see Appendix A for complete article). These items as correct change, tax forms, legal rights, the political system, airline schedules, medicine label instructions, unemployment and food stamp applications, civil service forms, etc. Many who were classified as "functional incompetents" had as much as eight years of formal education--some were even high school graduates. Only eighty percent of college graduates placed in the highest or "proficient" level. The National Reading Council's Survival Literacy Study pointed to markedly low reading and writing abilities as a basis for concluding that the teaching of functional skills is short-changed in the secondary schools (65:1).

The implications of these findings for the open-door community

college are ominous. A Carnegie Commission Report (16:59) indicates that "enrollment increases in higher education will, in the future, come primarily from students ranking in the bottom half of their high school class." They conclude from this that "the average ability and achievement level of incoming freshmen will drop" and "colleges will face greater diversity in student ability, achievement, and interests..."

Another Carnegie Commission report (18:44) underscores the increased participation of older, potentially underprepared adults. They project a significant increase in college attendance by twenty-five to twenty-nine year-old adults through the year 2000 (see Appendix B). These students, joined with returning veterans and reentering mothers, constitute a large segment of potentially marginally prepared students. Faced with the influx of under-prepared students, junior colleges must answer four questions:

- 1) What level of basic skills preparation has been provided currently enrolling freshmen and what are their specific deficiencies?
- 2) What has been done to date by community colleges in basic skills remediation?
- 3) What are some program options open to a sincerely concerned institution?
- 4) What is the status of research in this area?

The first two questions will be answered in Sections I and II of the paper. These sections are research oriented and fulfill the requirement for the Research in Reading course. Sections III, IV, and V consider the remaining questions. These sections are less research oriented and pertain to the assignment for the Administration of Reading course. Because the methodology shifts within the paper, I apologize for the slight discontinuity of tone.

Medsker and Tillery reported in 1971 that eighty percent of college-age youth in California enter higher education through community colleges; in Illinois, fifty-four percent; in New York, fifty percent; and in Florida, sixty-nine percent (49:3). They further note that approximately one-third of all students entering college are availing themselves of the "open door" concept of community junior colleges. As we have already seen, these students will be drawn primarily from the bottom half of their graduating classes.

However, even the top half of graduating seniors profile poorer than a few years ago. National measures of basic skills competency indicate a steady decrease in literacy levels. Nineteen seventy-five high school graduates posted new lows in Scholastic Aptitude Test (SAT) scores. The College Board (21:4) reports that the scores have been declining since 1962-63 and this year were forty-four points lower on the verbal and thirty points lower on the math than 1962-63 national score averages. "The declines before 1963 were small compared to the declines of recent years, and the declines among 1975 graduates were the largest yet." Twenty percent fewer 1975 graduates than 1974 graduates scored above 600 in the verbal portion. Nineteen seventy-four studies showed no decline in SAT validity and indicated it was somewhat easier, not harder, to attain a given score.

A disturbing parallel trend is an increase in high school grades. As the result of a 1973 national survey of 318,178 college freshmen from 579 institutions, Astin (4:483) notes that the proportion of high school graduates and their grades are on the increase. In 1973, 37.9 percent of the new college freshmen had at least a B+ GPA, as compared with only 28.1 percent of the 1969 freshmen. The percentage of freshmen with high school GPA's below C+ decreased from 32.5 percent to 21 percent between 1969 and 1973. Astin concludes that "while it might be tempting to conclude from these trends that college students are getting brighter, recent evidence from the major college admissions tests suggests that ... grading standards in the high school have been relaxed somewhat during the last four years."

Fenske and Scott (26) reported that the GPA average for entering freshmen at four different sized public schools changed as follows:

Males	1968	2.25-2.68
	1972	2.44-2.80
Females	1968	2.53-2.93
	1972	2.70-3.03

During the same four year period American College Test (ACT) scores for the same group declined. Bolin (12:149) similarly indicates that "in 1964, the percentage of honors graduates at all institutions was 14.2 percent. By 1969, that percentage had risen to 20.8 percent, and by 1974 it had spiraled to a lofty 42.2 percent." However, during the 1969-1974 rapid rise in honors percentage, SAT scores for the honors group did not increase. Bolin concludes that "this latter trend quickly dispels the 'superior student' theory."

Rouche (57:8) points out that in a pilot survey conducted in Texas he found Nelson-Denny Reading Test scores for college English courses was slightly above tenth grade level. In remedial and developmental courses, the range spanned grade levels three to twelve.

Three single-school studies mirror these national patterns. At the University of Minnesota Twin Cities Campus freshman class high school GPA's increased from 2.72 in 1967 to 2.94 in 1973. However, their Minnesota SAT percentiles dropped from sixty-nine percent to sixty-four percent (33:12). A 1974 study at New College Hofstra University revealed that while the mean high school decile remained the same, SAT scores decreased four to five percent for entering freshmen (40). In a study of 358 open-enrollment college freshmen using the Nelson-Denny Reading Test, the researchers found thirty percent at or above grade level, thirty-three percent slightly below, and thirty-six percent considerably below (48).

Despite inflated high school grades, it is evident that basic skills proficiency is decreasing on a national scale. This is especially alarming for community colleges since, as we have already seen, their students are drawn primarily from the bottom half of this national group.

As early as 1929 Von Klein Smid and Touton published a monograph disclosing that "the inferior work of lower division college students is frequently due to inadequate reading preparation and what is termed 'the laws of learning'" (22:234). Recent studies indicate that pattern has not changed.

One finding of an evaluative study of the CHANCE program at Northern Illinois University was that the "faculty concluded that the alarmingly poor retention rate reflected the kind of instruction these students had received in the basic communication skills prior to arriving at the University" (71:1). A similar study at the City University of New York (46:2) found that "the content of previous high school courses often does not meet the prerequisite levels necessary for survival in freshmen courses."

Ennis (23) implies that it is too easy to "pass the buck" downward to previous teachers and to "write-off" a poor student early in his education. Bader concurs that "the basic skill level of graduating students in the city, as well as the South, is not in keeping with their potential--indeed, for many, is not sufficient for employment" (5:591). More specifically she points to a "lack of specificity in the instruction of skills" for failures in academic and vocational areas.

It should be acknowledged that inadequate preparation is not ~~the~~ only contributor to diminishing freshman profiles. Anderson (2:1) pinpoints declining enrollments, lower admissions standards, rapid expansion, and the popularity of community colleges as additional factors.

However, secondary level developmental programs are apparently far from what they proclaim to be. Artley concludes that "while systematic development of reading competencies and interests are the purported goals, the actual status of developmental reading varies greatly." (3). Artley quotes an earlier study by Smith that found only seven of one hundred fourteen school programs satisfying criteria of comprehensiveness and quality.

Specific deficiencies are noted for inner-city and Southern school systems. Bliesmer (10:13) highlights low scores on the Davis Reading Test and all parts of the ACT for students graduating

from inner-city or eighty percent negro high schools. In the same survey of Northern Illinois University freshmen, Bliesmer concluded that those with a 1.8 or lower GPA at the end of the freshman year had not developed good study habits.

The previously noted C.H.A.N.C.E. evaluation (71:5) enumerated several specific freshman deficiencies, including basic writing, reading, and speech difficulties; low self-concept; inadequate vocabulary; weak or absent test-taking skills; and lack of library skills. These findings are underscored by the Carnegie Commission Conclusion (16:61) that "large numbers of students who can barely read and write receive high school diplomas; equally large numbers drop out of school before graduation."

The profile of the resultant marginally-prepared student is vividly portrayed by Moore in Against the Odds (50:3):

He is subject to deliberate professional neglect....
No books are written about him and virtually no
research...This student is an afterthought...One
of the academic squatters...Treated as the villain
rather than the victim...Attitude of his instructors
is that he cannot learn...He knows he is not wanted...
Hundreds of his questions go unasked, thousands go
unanswered...Poor teaching for him is legitimate...
He is no stranger to failure...The odds are against
him...The new (high-risk) students are those whose
erratic high school records, economic plight, un-
impressive standardized test scores, and race/
cultural/class distinctions succeed in placing
them at a disadvantage in contention with the vast
majority of students.

Ideals for treating the needs of such students at the junior college level are easy to come by, but hard research into specific deficiencies, causes, and methods of remediation is almost non-existent. Although there is widespread recognition of the problem, only twenty percent of the community junior colleges surveyed by Schenz (60) had designed special programs for academically underprepared students. Even "those that do have so-called developmental programs," according to Blocher (11:208) "have frequently organized them in haphazard fashion and have uniformly ignored the responsibility to evaluate their contributions honestly." Rouche (57:61) more bluntly asks "Can a community college remedial course rightfully expect to accomplish in one or two semesters what the public schools have failed to accomplish in twelve years?"

II UNBENT, UNSPINDED, BUT NEVERTHELESS MUTILATED

"It strives for continuities and creates fragmentaion. It delivers less than what it so generously promises. It often fails the students who need most help. To those who seek direction, order, goals and purpose, it offers the jigsaw puzzle of an all-purpose curriculum. Its all-purpose curriculum is useless." (35:2)

Five years have elapsed since Jennings' severe criticism and many new dimensions have been added to the all-purpose curriculum. For the marginally prepared student, however, remedial/developmental programs have met with limited (at best) results. The answer to our second question, "what has been done to date by community colleges in basic skills remediation," reveals a quantitative, if not qualitative, commitment to special programs for the underprepared.

Despite Jennings' negativism, Ferrin reported as early as 1971 in a study of seventy-six percent of the one hundred eighty public two-year colleges in the Midwest 1) one out of nire students was involved in some form of developmental education 2) eighty percent of the responding colleges offer remedial courses, fity percent offer special skills services, and thirty-three percent offer formal developmental programs (27). The relative effectiveness of the offerings is not evaluated.

The majority of colleges that evaluated their remedial/developmental programs reported negative results. In a study conducted at the University of Indiana Pedrini and Pedrini (51:7) matched groups of remedial and non-remedial students. They found the remedial students achieved poorer grades in all areas, with their best grades coming during the semester of remedial assistance. The 1974 Program Audit for New York State's SEEK, EOP, AND HEOP compensatory programs covering 1966 to 1973 concluded "not only is SEEK student academic achievement poorer than that of CUNY'S (City University of New York) regular students, but it is also poorer than that of the open admission population enrolled at CUNY'S senior colleges"(72:68).

From a study of the remedial reading-writing program at Miami-Dade Junior College Losak (44:19) deduced that the program was

successful in producing a slightly higher first term GPA, but it was unsuccessful in producing success in typical academic courses or in reducing withdrawal from college. Steverson's study (64:18) of all Florida community colleges revealed one college at which former Guided Studies English students took the regular College English course. Of those 69.6 percent passed with D or better, but 56.3 percent received D--a grade which generally does not transfer to senior colleges. The same study (64:19) lists another Florida college at which only 52.3 percent of the students entering the remedial course completed it satisfactorily. Of these, only forty-seven percent continued into regular college coursework.

Bake (6:58) examined the effectiveness of a reading and study skills program at the University of Wisconsin with two groups of "high potential" students. Initial gains on the Iowa and Cooperative tests were noted, but retesting one and two semesters later revealed only rate increases as permanent gains. The GPA's of both groups were lower than the control groups after a lapse of one or two semesters. A team-taught communication skills course presented at Quinsigamond Junior College showed modest gains in reading grade level from 11.1 to 11.8 as measured by the Nelson-Denny Reading Test (14), an increase of seven months after a semester (five months) of remediation.

Schoenberg (61) found significant Nelson-Denny Reading Test gains for students participating in a pilot study of a special reading course designed for junior college freshmen. However, no significant differences were found between grades in traditional English courses taken before and after the special reading course. A similar absence of lasting effect was noted by Snyder and Blocker (62) in a three year study of four hundred fifty-six remedial students at Harrisburg Area Community College. There was a severe GPA drop of 2.12 to 1.64 from the first semester (developmental program) to the second (regular program). Similarly, Gaither's (29) longitudinal study of remedial program students at Fresno City College found no significant "lasting" improvement based upon GPA's at the end of four successive semesters.

An extensive pre-admission program at the University of Utah, allowing one to three quarters to complete and including three remedial courses, qualified only slightly more than one-quarter of the 1,040 students enrolled over a four-quarter period and only 22.1 percent actually enrolled in the regular college program. Grant (31:324) concluded "a pre-admission program makes a small and possibly dubious contribution to the post-high school education of high school graduates of low academic promise."

Snyder and Blocker (62) conducted a three-year study of developmental students at Harrisburg Area Community College and found that between thirty-three and forty percent did not return for a second year. Only twenty-seven percent earned the associate degree and only twenty-five percent maintained a C or better average. Similarly, Ludwig and Gold (45) found only thirty-four percent of the remedial students at Los Angeles City College completed two years of college, while only thirty-seven percent maintained a C or better average.

Not all programs established to date have met with negative results. Several multi-faceted programs appear to have achieved at least limited gains. Berg and Axtell (7) contend that "since the Junior College is the institution of higher education which has accepted the major responsibility for the education of disadvantaged students, it is important to understand that the junior college enrolls many such students after they have experienced twelve years of 'cumulative deficit' and the concomitant deterioration in attitudes toward academic work, perception of self, intensity of motivation, and level of aspiration." Perhaps, then, direct remediation of specific skills deficiencies is not sufficient.

Rosella (56) studied the effect of special reading and study skills instruction combined with counseling on the success of "high-risk" students at Bucks County Community College. Measures included pre- and post-test forms of the Cooperative Reading Test and the Brown-Holtzman Student Attitude Scale, plus a comparison of semester averages, english grades, and frequency of failures. Results showed a significantly higher semester average for the experimental group as compared to a similar control group. Heinkel (32) arrived at

similar findings when comparing an experimental group of General Studies (four course program) students at California junior colleges with a control group taking the regular freshman program. Heinkel found the General Studies program encouraged males and minority students to enroll for a second semester. Minority students also dropped fewer units for the first semester.

Levin's (43:8) assessment of the open-admission program at CUNY tested the relationship between remedial courses with a reduced credit load and student performance. Measures included GPA, sophomore year credit generation, credit ratio, and retention. He discovered a definite improvement during the freshman year and some retained improvement during the sophomore year. A narrower study at Community College of Allegheny County which tested a combined developmental reading and study skills lab approach led Fields (28) to highlight a forty-eight percent increase in reading efficiency scores for the experimental group.

A group of University of Pennsylvania marginal freshmen received individual study counseling at the University's reading clinic. Lesnik (42) reported significantly higher GPA's at the end of the year for the study group than for a control group. Carpenter and Sawyer (19) observed ninety high-risk freshmen at Clemson University (thirty experimental; sixty control). Pre- and post-testing using the Nelson-Denny Reading Test revealed that a combined reading improvement course plus special english course resulted in higher gains in vocabulary, reading rate, and total reading for the experimental group.

An unusual study was conducted at Texas Southern University by the Department of Reading and Study Skills. Two matched treatment groups were exposed to either a machine-oriented course (tachistoscopes, controlled readers, filmstrip projectors, tape recorders) or a textbook-oriented course (Silvaroli Reading Improvement Program and Toward Better Reading Skills). However, Whittaker reported no significant differences in group gains after pre- and post-testing using the Nelson-Denny Reading Test (67). Using the same test vehicle, Blai (9) found a forty-four percent vocabulary improvement and a thirty-seven percent comprehension improvement over the course of a four-year study of the comprehensive reading development program at Harcum Junior College.

Stevenson (64:12) asserts that "existing programs in most community colleges are remedial programs, centered on institutional requirements, not on student needs. Group remedial instruction serves as an excuse for a lack of a well-defined and worked-out program to fit student needs. The courses commonly given are reading, English, and mathematics. The purpose of these courses is to improve the students 'capacity to do college level work--' to go on into the regular college transfer courses." This conclusion is echoed by Kendrick and Thomas (36) who observe that "research on the extensiveness and effectiveness of compensatory programs and practices has been limited in quantity and scope. Yet, even with the paucity of evaluative studies, it is safe to note that evidence points to the conclusion that existing compensatory programs and practices have made little impact in eradicating the problems of disadvantaged college students, nor have the majority of colleges accepted this area as their role." Finally, Gordon and Wilkerson (30) further assert that "seldom do current research studies contain hard data pertaining to the persistence, academic achievement, or attitude development of students in remedial programs."

Rouche and Kirk (57:7) capsule these conclusions in their summary of related research and literature. They found that 1) there is a serious lack of research on the effectiveness of current remediation efforts in community colleges, 2) even with the limited research available it is evident that remediation in two-year colleges has been largely ineffective in remedying student deficiencies, 3) the number of critics of two-year open-door colleges is increasing with criticism focused on overly zealous aims and a failure to evaluate current efforts.

Similarly, Artley (3) finds that in general, trends indicate 1) English teachers handle reading classes, 2) most programs are in the experimental stage, 3) most programs are only short-term reading and study classes taught as part of the content classes, 4) only a few programs provide separate reading classes.

Artley recommends, as partial solutions to the problems, "teaching of reading and study skills in content classes, widening of scope to include developmental reading, improving program direction, and providing trained personnel."

III THE SHOTGUN OFFENSE

Community and junior colleges have accepted at least in principle, the Carnegie Commission recommendation "that all state plans for the development of two-year institutions of higher education should provide for comprehensive community colleges, which will offer meaningful options for college-age students and adults among a variety of educational programs, including transfer education, general education, remedial courses, occupational programs, continuing education for adults, and cultural programs designed to enrich the community environments." (17:16). Considering the diversity of students the community colleges actively recruit and the failures of numerous established programs we have already noted, we must reiterate our third question from the Introduction, "what are some program options open to a sincerely concerned institution?"

The administration and implementation of a remedial/developmental program on the junior college level must concern itself with six distinct areas: placement, program components, staffing, physical facilities, equipment and materials, evaluation. Since staffing, facilities, and materials will be dealt with in other papers, our discussion will focus on the three structural aspects.

A. Placement

Selection of entering freshmen for participation in compensatory programs actually depends upon the type of remediation available and the definition of "underpreparation" used to identify the subjects. Schafer (59:4) realistically limits the term disadvantaged student

to those of low ability, low achievement, academic underpreparation, and psycho-social maladjustment. This profile could include, but is not limited to the underachievers, poorly educated, racially and culturally isolated, marginally educable, those with low self-concept and those with extensive gaps between periods of formal education. Needless to say, a single indicator, such as SAT scores or high school GPA, will not suffice for such a diverse group.

In a study of academic motivation variables as predictors of college achievement Richards and Casey (55) found the Test of Effective Academic Motivation and individual sex to be "poor and unstable" predictors. The Torrence Test of Creative Thinking was "stable, but very weak," while the SAT verbal and math scores plus the high school GPA were "strong and stable" predictors. Snyder and Blocker (62) also found a positive relationship between high school rank plus ACT math scores and earning the A.A. degree.

A 1973 study of the 95 member institutions of the College Reading Association disclosed that most (93%) place students through a combination of a standardized reading test and the student's own analysis of his difficulty (25:6). Rainwater (53:25) reported research by the General College of Eastern New Mexico University has shown the twentieth percentile on the Diagnostic Reading Test to be "the absolute minimum for predicting academic success." Worsley (69) found ACT English scores only slightly less accurate as a predictor of first semester freshman GPA than the student's high school GPA.

In one of the few studies concerned with the placement of adult students, Killian (38) found Reading for Understanding test scores a reliable differentiator between persisting and withdrawing adult

students. Another adult-focused study involved the Utah Job Corps' General Educational Development Program (15). They found a Gates Reading Survey score of 7.0 and a 7.0 SAT paragraph meaning score to be reliable predictors of success.

At Eastern New Mexico University Husemoller (34) found Cooperative English Test scores heavily reliable as predictors, while at Arizona junior colleges the best single predictor, according to a study by Russo (58), was the ACT English score. In the Florida schools system, the reading index score on the Florida Twelfth Grade Test was found to be "a significant predictor of the cumulative GPA in the freshman year of college. Results of the analysis were significant at the .05 level of confidence" (22:236). What are actually employed as placement indecies in most Florida community colleges are a combination of 1) standardized test scores, 2) the student's socio-economic background, and 3) referral by college counselors and instructors (59:27).

Despite the variety of indecies available, Tillman (2:3) indicates that the Iowa Silent Reading Test, the Nelson-Denny Test of Reading, and the Cooperative Reading Test are the three most frequently used for placement. It is evident that most colleges have failed to avail themselves of the few studies that have been completed in this area. Certainly a well-administered program must establish local placement norms within the paramaters of national normative standards. The administrator must also consider each student's prior academic achievement, any available assessments of potential, his emotional profile, previous educational experience and degree of motivation.

An ideal placement program would include:

- 1) initial highlighting of high-risk students based upon high school GPA and class rank, guidance counselor recommendations, and scores on a nationally normed test (e.g. SAT or ACT).
- 2) group testing of all in-coming freshmen using a combination of a reading test and a basic English skills test (e.g. Nelson-Denny Reading Test and Houghton-Mifflin Test of English).
- 3) individualized testing of all students placed in the remedial program.
- 4) referrals by instructors and faculty advisors of all students not placed in the remedial program who are experiencing academic difficulty.
- 5) automatic placement in the program of all students on academic probation.

B. Program Design

Assuming the availability of adequate facilities, a qualified and interested staff, and all necessary equipment and materials, the actual components of the compensatory program should be designed to meet the needs of the students. We have already noted the greater success potential of multi-faceted programs in the studies by Rosella (56), Levin (43), Fields (28), Lesnik (42), Sawyer (19), and Heinkel (32). Heinkel's study of the General Studies program in California junior colleges revealed one of the better organized programs. General studies is a four-course composite of career planning, techniques of study, basic english, and reading

improvement. All of these skills, as we have already seen, are essential to academic achievement and can aptly be termed "survival skills."

Other facets can be added to programs as student needs demand. Many institutions utilize student and paraprofessional tutors. At Los Angeles City College student tutors are available for english, math, and science courses (45). The New York SEEK, HEOP, and EOP programs utilize a combination of professional study counseling and student tutors (72:13). Santa Barbara College utilizes two types of tutors, both working under the guidance of reading laboratory faculty. One type is paid and works in the lab at least fifteen hours per week. The other type is voluntary and works for academic credit. Both types attend weekly meetings and monthly training sessions.

Stevenson's study of the Florida junior colleges (64:14) revealed "all of them expressed some feelings of dissatisfaction with their own programs and a hope that, with some knowledge of the success and failure of directions, methods, and developments of other programs, their own could be improved." The same study pointed out that only six colleges have separate Guided Studies or Directed Studies departments; other institutions handle remediation by disciplines. Such fragmentation is quite common, as noted in the Fairbanks and Snozek (25:9) study of College Reading Association member institutions. Administration was vested with Counseling (17%), Education (33%), Psychology (3%), English (18%), Central Administration (13%), Other (33%). [The percentage total of 117% results from many institutions dividing the program administration responsibilities].

Perhaps one of the most urgent priorities of a compensatory program administrator is to centralize all program functions through a single department or office, ideally one which has remediation as its sole function.

Other facets, besides tutors, are viable options for compensatory programs. Spencer (63) outlines a program that consists of a six-week summer clinic during which student needs are diagnosed, reading and study skills are taught, and special assistance is provided for specific courses students will take in the Fall. During the Fall semester there is a followup general reading program, augmented by reading assistance in social science, science, humanities, and math.

At Northern Illinois University marginal students are assigned a nine-hour block of courses in speech, reading, and english. These courses are team-taught by three instructors, one from each discipline. In addition there is peer tutoring and a Skills and Resource Center (71:2). Many institutions utilize combinations of group instruction, individual instruction, and laboratory work with moderate success (64:16).

At member schools of the College Reading Association ninety-eight percent teach reading skills, ninety-five percent teach study skills, and sixty percent provide counseling (39% individual, 21% group) (25:5). Within the remedial programs, time is divided into seventeen percent lecture, thirty-five percent exercises, eighteen percent student's own work, fifteen percent discussion, eleven percent machines, and four percent other (25:10).

At Brooklyn College (41) students are limited to nine course-hours plus three non-credit hours of remedial reading. This reduced load practice, growing in popularity at many institutions, reflects the belief that students who have demonstrated learning difficulties should be spared the pressure of a full course-load - at least during their first semester.

Learning Centers are becoming popular alternatives to formal remedial programs. They are usually less expensive and easier to staff. No thorough studies have been completed to date to verify their effectiveness. Maxwell (47:462) defines the Learning Center as "a person-centered program where educational technology is supplementary and where students receive help in any basic course..." Unfortunately, at many institutions the Learning Centers have become "plug-in" centers where students having problems with a particular course can avail himself of programmed materials, tapes, filmstrips and slide/cassette programs in a self-help situation. Rather than fulfilling a supportive role, the Learning Center thus becomes a mechanical surrogate for the teacher or tutor in a remedial lab. This option, while a positive adjunct to a compensatory program, is a tempting "tokenism" for budget-conscious administrators.

A rather broad-based, inclusive program operated by a Student Development Center is described by Biggs (8). The program consists of a ten-week, forty-hour-per-week learning model individualized for each student. The components include reading, writing, and speech laboratories; group and individual counseling; and courses in problem solving, motivation, time study, mathematics, dramatic interpretation, and psychology. No studies of long-term effectiveness have been

completed.

Additional options include open-ended courses, where a student takes as long as necessary to achieve a minimum proficiency; non-punitive grading, where a student is never failed in a course and peer counseling, an offshoot of student tutors (57:9). Tarrant County Junior College teaches its Basic Studies program through a block-schedule, vertical-team approach. During the freshman year, all high-risk students take a predetermined set of courses in a time block with other high-risk students. All courses for each group of high-risk students are taught by the same vertical-team of five instructors and one counselor. The operational theory is that "the student is placed in a dynamic environment which provides individualized attention by instructors...[and] the use of innovative teaching techniques and an interdisciplinary approach to learning" (57:14).

At El Centro College a separate division of developmental studies was established with a separate staff and budget. Of several factors influencing the formation of a separate division, the one most striking was "that misunderstandings which typically exist between counselors and instructors in many educational institutions could be minimized within a single division" (57:23). Students in the program are exposed to courses in reading, writing, mathematics, group guidance and counseling, advanced reading, and high school equivalency.

Unlike Tarrant County and El Centro campuses, Rouche's study of San Antonio, Burlington County, and Southeastern Community programs revealed decentralized developmental programs with no set staff or assign counselors. At San Antonio, even the coordinator of develop-

mental studies is not a permanently designated individual. Most often administration is passed about among department chairman (57:32).

At Dean Junior College the developmental program consists of a Basic Communication course (see Appendix C for sample syllabus), which combines the teaching of reading, writing, and study skills. This course meets four times a week - twice for group sessions and twice for individualized lab sessions (see Appendix D for sample lab syllabi). The labs are self-paced and students who do not complete the course may continue beyond the end of the semester, receiving an IP (in-progress) grade until the course is completed. To obviate one of the most serious morale problems, the course earns three credits toward graduation. Most senior colleges now accept credits from developmental courses if they are part of a degree package.

Supportive courses include Developmental Reading, an intensive remedial/developmental treatment meeting on a one-to-one basis two-to-four hours each week. It is a non-credit course, and the assignment of an instructor to this tutorial approach is a budgetary luxury, but an academic necessity. A quarter-course in Techniques of Study is available to all students and focuses on "survival skills." Students earn one or two credits, depending on whether they meet with the instructor for two or four hours per week. Ideally, all students on academic probation or experiencing academic difficulty would be automatically funneled through this course.

Student tutors are utilized on a regular basis during lab sessions and peer tutors are provided for almost all subjects as students request them. Tutors receive credit (Keller Plan) rather than

money for their assistance. Psychological and social counseling is provided through the Study Counsel Center.

What should by now be abundantly clear to a fledgling administrator is that any compensatory program must be adaptable to changing student needs. Coordination through a central department or division is essential for versatility, uniformity, and quality control. The program must treat the whole student, not just remediate a specific skills deficiency. These requirements are most essential at the junior college level where the student clientele is so diversified.

C. Evaluation

"A serious weakness recognized by all of the colleges is the inadequate evaluation of their programs" (64:14). Only two of the Florida colleges surveyed by Stevenson were able to furnish evaluative data. The 1974 Program Audit of the New York slate SEEK, HEOP, EOP programs was able to publish limited data on what was vaguely termed "satisfactory progress" (see Appendix E). However, the lack of a defined control group (simply all other students) and the lack of concern for possible Hawthorne Effect influences nullify the import of the findings.

In a review of thirty-one measures of college success related to reading training Wright (2:5) found only eleven with comparable control groups. Similarly, of the ninety-five member institutions of the College Reading Association, only twenty-four percent re-tested after an interval to check the permanency of gains (25:7).

As early as 1966 Wilkerson asserted: "Despite the almost land-

slide acceptance of the compensatory education commitment, we find nowhere an effort at evaluating these innovations... Where evaluative studies have been conducted, the results typically show ambiguous outcomes affecting unknown or amorphous educational and social variables" (57:6).

Proper evaluation should be both immediate and longitudinal. At the end of the program there should be a post-testing session using pre-test and placement designs. The longitudinal criteria should include - but are not limited to - persistence, semester-by-semester GPA, number of failures and course withdrawals and attitudinal changes. Persistence, in particular, has been overlooked as a major indicator of program success. Prediger (52:62) writes: "In light of the dropout problem in our colleges and universities; it seems appropriate that more attention be paid to persistence in college as a criterion of success. Ultimately, the student's success in college is judged not in terms of his GPA but, rather, in terms of the educational program which he has completed."

Only one extensive study has been published that meets these criteria, and the conclusions are interesting. Rouche (57:58) found that:

"(1) Students in remedial programs earned significantly higher grades than did high-risk students in nonremedial programs. (2) High-risk students of like race-ethnic groups earned higher grades in remedial programs than did those in non-remedial programs. (3) In each college, grades earned by successive year-groups of students enrolled solely or predominantly in courses in developmental studies improved each year. (4) Academic performance of students in remedial programs dropped significantly after they entered regular college programs. Even with the significant decline in student retention

acting as a selective or weeding-out factor, the grades earned by remedial students in regular college courses were, with two exceptions, in the D range. (5) Students in remedial programs persisted in college to a greater extent than did high-risk students in non-remedial programs. (6) At each college, students in remedial programs expressed greater satisfaction with the instructor/instructional component of the remedial program than they did with the counselor/counseling component. (7) Based on findings for the 1969-1970 and 1970-1971 academic years, 50 to 54 percent of high-risk students in remedial programs completed a third semester of college. Thirty-five percent of the 1969-1970 group completed two years of study."

IV UNKNOWN SOLDIERS IN THE ACADEMIC WAR

Returning to the fourth question posed in the Introduction is almost fruitless. It is evident from the previous sections of the paper that little has been done in the area of formal research pertaining to remediation at the college level. Many institutions have written descriptions of their programs for dissemination. Some studies have been conducted to test the validity of measures used to predict success potential for college-level work. However, apart from the Rouche/Kirk study of five Texas community college remedial programs, little has been accomplished in this area.

Anderson (2:1) identifies four specific areas where research is needed: 1) "adequate and appropriate criterion measures of success," 2) "improved measurement tools," 3) "appropriate statistical design in program evaluation studies," 4) "greater attention to affective variables as predictors of success." To these we might add research into the causes of deficiencies evidenced by college-bound students, concrete predictors of college success, weighted listings of remedial programs/methods according to specific deficiencies and student profiles. Are attainment of the AA degree, final GPA, and degree of persistence the only valid measures of academic achievement against which to compare the accomplishments of remedial students? Are there definable degrees of compensatory education? What is the actual success level of current compensatory programs? How important is the involvement of counseling in the remedial program?

To what extent is student motivation affected by credit/non-credit and grade/no grade status of the remedial courses? Is the success ratio of open-ended courses greater? What constitutes a qualified remedial instructor? Is the junior college responsible for what twelve years of education has failed to achieve? Is the junior college the appropriate institution to handle remediation (return of the prep school)? Can a single semester program, no matter how broad and thorough, ever be effective in the face of most remedial students' cumulative deficit? The list of unanswered questions is endless! Perhaps the really basic question, since we can quantify what a remedial student should be, is do we know who a remedial student is? If remediation is supposed to be student-oriented and tailored to student needs, isn't it about time community colleges defined their clientele?

Rouche and Kirk (57) focus on the major problem, "that in many cases programs have been conceived and implemented with little or no thought given to the systematic collection of data for evaluation purposes." Apart from leaving us with the unending list of crucial academic questions we have already noted, this practice leaves program administrators, deans, boards of trustees, boards of regents, and federal funding agencies without "concrete information on which to base policy design, introduce improvement and change in the teaching-learning process, and allocate funds to those programs and approaches which have the best potential for producing successful learning

experiences for high-risk students."

Kingston (39:338) notes that "most reading studies are not well enough designed to study whatever problem is under attack." Consequently, most studies are statistically inaccurate or inadequate (54). Too many studies suffer from experimental bias, a desire to prove the effectiveness of the pilot program to superiors. Over-enthusiasm for a particular technique or approach can also color the findings (37). Braam sees the research concerned with the college-adult population suffering from four limitations:

- a) extremely restrictive samples
- b) a taboo against replication
- c) a lack of collaborative research
- d) the absence of longitudinal studies to provide
the necessary follow-up (13)

A "high proportion" of these studies are "peripheral or just not relevant to the teaching situation" (20:106). Only about twenty-eight percent of them investigate or evaluate reading instruction per se. The saddest finding is that reading research seldom anticipates the future, but "traffics principally in status surveys and program descriptions" (24:324). One need only review the type of studies available to this paper to see the validity of this assertion. Given such characteristics and limitations, instructional practices will continue to be based on "educated guesses" rather than research findings.

Unlike the fifties and early sixties, student recruitment is now quite competitive. Even state institutions are being

closed for lack of enrollment. Community college enrollments will continue to increase, especially in the adult education sector, only if they develop effective programs for those students who would not ordinarily qualify for or seek to attend college.

V RECOMMENDATIONS

Community colleges can develop effective programs if they have the right institutional and administrative commitment.

Rouche and Kirk (57:82) offer eleven suggestions for those institutions that wish to effectively serve the new influx of high-risk students:

1. The community college should emphasize and work to achieve its goal of serving all students in its community.
2. Only instructors who volunteer to teach nontraditional students should ever be involved in developmental programs.
3. A separately organized division of developmental studies should be created with its own staff and administrative head.
4. Curriculum offerings in developmental programs should be relevant.
5. Regular college curriculum offerings should be comprehensive.
6. All developmental courses should carry credit for graduation or program certification.
7. Grading policies and practices should be nonpunitive.
8. Instruction should accommodate individual differences and permit students to learn and proceed at their own paces.
9. The counseling function in developmental programs must be of real value to students.
10. Efforts should be made to alleviate the abrupt transition from developmental studies to traditional college curricula.
11. Once programs are established, effective recruitment strategies should be developed to identify and enroll non-traditional students.

Study shows one-fifth of US adults functionally illiterate in today's society

Boston Globe
10/30/75

By John Mathews
Washington Star

WASHINGTON — About one-fifth of the nation's adult population — some 23 million persons — is "functionally incompetent," lacking the basic educational skills needed to get along as workers, consumers, citizens and even as parents, according to a new government study.

Nearly one-third of the population, 34 percent, just gets by; and only a minority of the adult population, 46 percent, is deemed "proficient," possessing the skills needed to cope with the complexity of modern living.

The four-year study, supported by more than \$1 million from the US Office of Education and conducted by the University of Texas at Austin, defines in a new way what it means to be literate.

Instead of just determining whether adults can read or write at a fifth grade level, the study tried to find out what skills are needed to function in such fields as consumer economics, work situations, knowledge of community services, health problems, government, and law.

Similar adult literacy studies have not been conducted in any of the New England states, according to state education authorities.

However, a study in May, 1974, showed a small improvement in the reading ability of Boston's school children. The improvement came after a steady six-year decline in

reading scores among the city's children.

The study also showed however, that most of Boston's school children were still reading below national norms.

Some of the results of the Federal study, which the University of Texas team called "surprising, perhaps even shocking," included:

- Given a receipt from a drug store listing purchases and a total, 28 percent of the adults tested could not figure the correct change they should get after paying with a \$20 bill;

- 14 percent could not fill out a personal bank check correctly;

- Presented with a standard W4 tax form and information about the number of dependents, 30 percent did not enter the correct number of tax exemptions in the correct block of the form;

- 27 percent tested did not know normal body temperature is 98.6 degrees Fahrenheit;

- 34 percent felt police have the right to detain a suspect for as long as a week without bringing charges against the accused;

- Asked which states depicted on a map had the most US senators, only 51 percent knew that all have two senators;

- Shown a typical airline schedule, one-third of those tested could not answer correctly what flights should be taken to arrive at noon, and return home after a stay of one-and-a-half hours;

- 13 percent could not address an envelope properly for mailing;

- 33 percent could not determine which of two brands of aspirin was more effective after 25 minutes;

- 26 percent could not determine the best unit price among three sizes of cereal boxes;

- 20 percent could not explain correctly the meaning of equal opportunity employer.

Results of the test were divided into three "adult performance levels," based on education, income level and job status of those who took the test. Persons placed in the lowest performance level, "functional incompetents," had a poverty or lower income, eight years or less of schooling and were either unemployed or in semi-skilled jobs.

The middle level called "functional" included adults with nine to 11 years of schooling, incomes above the poverty level and higher status, generally "blue collar" jobs.

"Proficient" level was made up of those with higher incomes, white collar jobs and high school education or more.

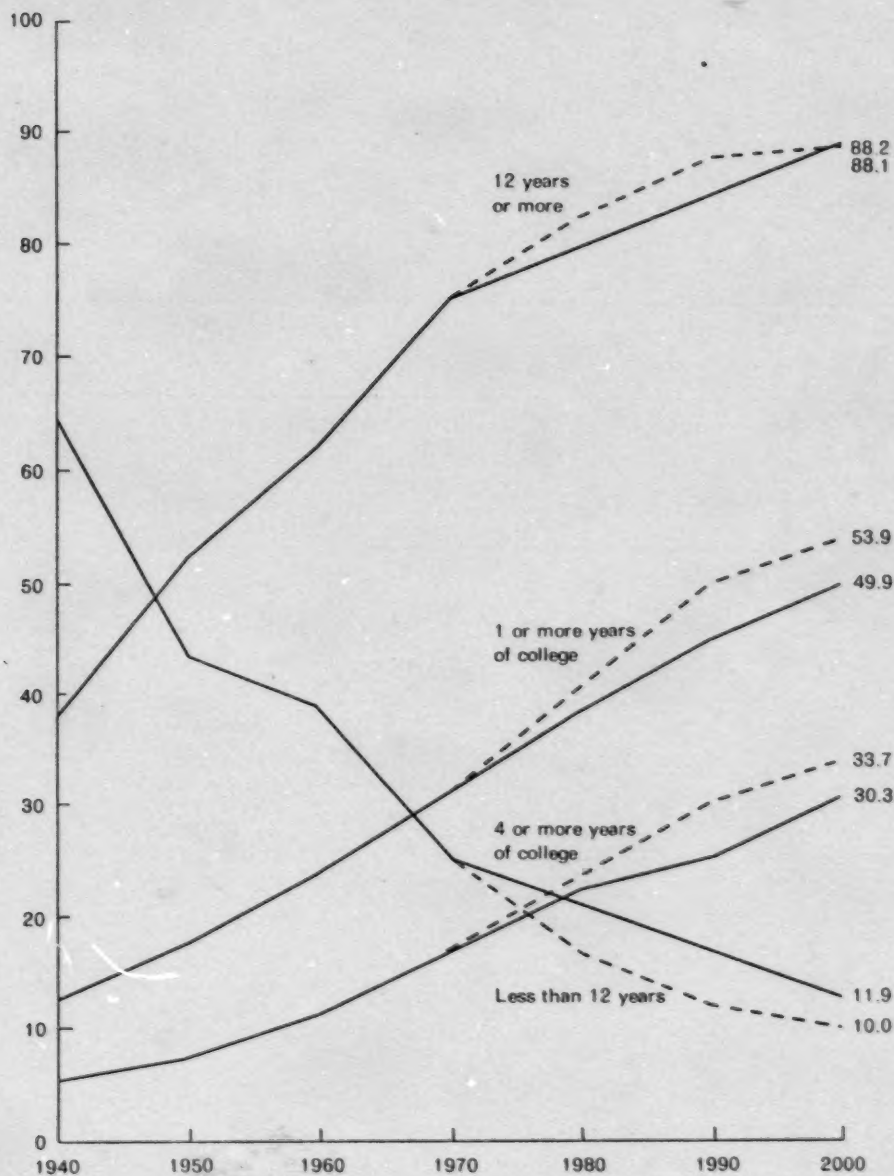
Generally, persons taking the test scored within the range expected for their level of education, income and job status.

Education, however, seemed to be the strongest factor determining whether a person was proficient in the basic knowledge needed to get along. Eighty percent of college graduates, for example, achieved scores in the highest category.

Boston Globe
10/30/75

APPENDIX B

CHART 8 Projected levels of educational attainment of the population 25 to 29 years of age



NOTE: Broken lines are based on assumptions consistent with Projection I prepared for the Carnegie Commission by Gus W. Haggstrom in 1971. Solid lines are based on assumptions consistent with Projection II prepared by the Carnegie Commission staff in 1973. Details of the later projections will appear in the Commission's forthcoming final report, *Priorities for Action*.

SOURCE: Carnegie Commission staff, 1973, based on Bureau of the Census and Carnegie Commission materials and assumptions.

DATE	TOPICS	ASSIGNMENTS
Sept. 15 16	Levels of Generality	Vocabulary #4 Searching pp. 1-32
Sept. 22 23	Scheduling & Concentration; Levels of Generality	Vocabulary #6; tape #5 sides 1 & 2
Sept. 29 30	Lecture Notes; Main Idea	* Body Lang., Chap. 1,2,3,; Vocab. #7; tape #3 sides 1 & 2
Oct. 6; 7	Main Idea; Reading the Textbook	Body Lang., Chap. 4,5 (slides); Vocab. #11; tape #4 sides 1 & 2
Oct. 14	Studying	Vocab. #12; tape #7 side 1 Vocab. #14
Oct. 20 21	Details; Textbook Mastery	Tape #7 side 2 Body Lang. Chap. 6, 7 Searching pp. 208-220 Vocab. #15
Oct. 27 28	Details; Phrase & Sentence Meaning	Body Lang. Chap. 8,9 Searching pp. 230-244 Vocab. #18
Nov. 3 4	Paragraph Meaning	Body Lang. Chap. 10, 11 W.C. Chap. 2, 11 (theme due)
Nov. 10		Vocab. #19 W.C. Chap. 3, 4 Vocab. #20
Nov. 17 18	Skimming & Scanning	Searching pp. 154-161 W.C. Chap. 5, 6 (theme due) Vocab. #21
Nov. 24 25	Critical Reading	Searching pp. 34-87 W.C. Chap. 7, 8 Vocab. #23
Dec. 1 2	Taking Exams; Study Review Techniques	Tape #8 side 1 (theme due) Vocab. #24
Dec. 8 9	Reinforcement	W.C. Chap. 9, 10

APPENDIX D

LAB SEQUENCE A

1. T: 26, 27, 28, 29, 30
2. PP: 2, 3
3. T: 31, 32, 33, 34
4. PP: 4, 5
5. T: 39
6. PP: 6, 7
7. T: 41, 42, 43, 44
8. PP: 8, 9

T: Tactics

PP: Paragraph Practice

LAB SEQUENCE B

1. HH: 1, 2, 3
2. IRE: Series III odd numbered exercises
3. HH: 4, 5, 6
4. IRE: Series IV odd numbered exercises
5. HH: 7, 12, 13
6. IRE: Series V odd numbered exercises
7. HH: 14, 15, 16, 17
8. IRE: Series VI odd numbered exercises

HH: Harbrace Handbook

IRE: Increasing Reading Efficiency

LAB SEQUENCE D

1. BBR: 1, 7
2. PP: 2, 3
3. BBR: 3, 4
4. PP: 4, 5
5. RT: pp. 1-17, 19-40
6. PP: 6, 7
7. RT: pp. 41-56; BBR: 5
8. PP: 8, 9

BBR: Be a Better Reader

RT: Reading as Thinking

PP: Paragraph Practice

APPENDIX E
SATISFACTORY PROGRESS

college	SEEK sample	Open Admissions (under 70 HSA)	Open Admissions (70-79 HSA)
Baruch	19%	14%	35%
Brooklyn	23%	10%	45%
City Col.	25%	4%	30%
Lehman	18%	12%	50%

(Although SEEK students at all participating institutions achieved higher than regular open admission students with high school GPA's below seventy, no indication is given of the number of SEEK students who would have been included in that regular pool.)

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